	Events during follow-up	
	Death	Recurrent Ischemia
t-PA⊕BBT	1/69 (1.4%)	24/69 (35%)
t-PA⊖BBT	19/94 (20.2%)	50/94 (53%)
PTCA⊕BBT	5/67 (7.5%)	23/67 (34%)
PTCA⊖BBT	9/91 (9.9%)	36/91 (40%)

Multivariate analysis identified BBT as an independent predictor of long-term survival in the t-PA arm, but not the PTCA arm. In PTCA pts, BBT was a univariate predictor of the combined end point of freedom from death, infarction, heart failure and dysrhythmias.

Conclusion: BBT appears to provide significant beneficial effects during long-term follow-up after t-PA for acute MI; these benefits were less impressive and not statistically significant in the PTCA-treated patients.

1023-114 Long-term Secondary Prevention After Myocardial Infarction with Amiodarone

Leszek Ceremużyński [1], Andrzej Budaj, Wanda Śmielak-Korombel, Jerzy Kuch, Maria Krzemińska-Pakuła, Janusz Maciejewicz, Edmund Nartowicz, Teresa Zaleska, Andrzej Dyduszyński, Piotr Kokowicz, collaborating centers of Polish Amiodarone Trial. [1] *Postgraduate Medical School, Grochowski Hospital, Warsaw, Pl*

The Polish Amiodarone Trial revealed significant reduction of 1-year cardiac mortality with low-dose Amiodarone (Am) after MI. To assess whether this beneficial effect persisted, the long-term outcomes of the pts of the Am treated group (n = 305) and of the control group (C) (n = 309) were assessed.

The probability of cardiac death after 12 and 46 months according to Kaplan-Meier curves was respectively Am 6.2, 17.4% and C 10.7, 19.5%.

The curves after 12 months remained parallel.

The comparison of 25 pts treated continuosly for 46 months with Am and 189 C pts not treated with Am revealed significant difference in survival curves in favour of Am treated group (p = 0.04).

Side effects occurred in 3 of 25 pts treated with Am during long-term follow-up.

Beneficial effect of one year Am treatment on survival after Mi persists for the next three years. The prolongation of therapy is feasible and diminishes the risk of cardiac death.

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Wednesday, March 22, 1995, 3:00 p.m.–5:00 p.m.
Ernest N. Morial Convention Center, Hall E
Presentation Hour: 3:00 p.m.–4:00 p.m.

1024-76 Beta-Adrenergic Blockade in Patients with Moderate Mitral Stenosis

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β-blocker therapy remains controversial in patients with mitral stenosis. In this randomized, double-blinded, crossover, placebo-controlled study, the effects of atenolol (50 and 100 mg/day) were assessed in 15 patients (age = 46 ± 11 yrs) with moderate mitral stenosis (mitral valve area = 1.0 ± 0.4 cm^2; NYHA class II–III) at rest (R) and during upright bicycle ergometry (E). Doppler-echocardiography was employed to compare heart rate (HR), cardiac (CI) and stroke volume (SVI) indices, diastolic filling period (DFP), and peak and mean (Mn Grad) transmitral gradients; a metabolic cart was used to obtain maximum VO_2, VCO_2 and anaerobic threshold (AT). β-blockade therapy did not improve exercise time, external work, max VO_2 or AT. During exercise, max VO_2 and CI decreased ($p < 0.05$) >11% and >20%, respectively, with atenolol. The following hemodynamic data are presented as mean ± sd:

		Placebo	Atenolol	
			50 mg	100 mg
HR	R	76 ± 13	60 ± 11*	58 ± 13*
(bpm)	E	144 ± 15	112 ± 23*	103 ± 21*
DFP	R	431 ± 97	604 ± 148*	629 ± 175*
(msec)	E	208 ± 35	277 ± 90*	300 ± 95*
SVI	R	22 ± 7	22 ± 6	26 ± 8
(ml/m^2)	E	21 ± 10	22 ± 10	26 ± 9
Mn Grad	R	5 ± 4	4 ± 3	4 ± 2
(mmHg)	E	20 ± 8	17 ± 8	15 ± 8*

*$p < 0.05$ Placebo vs Atenolol

Although HR and Mn Grad decreased and DFP increased with atenolol, SVI changed little compared with placebo. The data suggest that in spite of lower transvalvular pressure gradients little benefit in exercise performance is achieved with β-blocker therapy in patients with moderately severe mitral stenosis.

1024-77 Comparison of Immediate and Mid-term Results Following Percutaneous Mitral Commissurotomy with the Inoue Stepwise Technique and with the Double-Balloon Technique

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Immediate and mid-term results of percutaneous mitral commissurotomy (PMC) were compared following the use of the Double-Balloon technique (DB) and the Inoue stepwise technique (IN) under echo-guidance. Between 1986 and 1994, 1228 patients (pts) underwent PMC in our department, 586 pts with DB and, more recently, 642 pts with IN.

Before PMC, no significant difference was found between the two groups as regards clinical or echocardiographic or hemodynamic data.

Good immediate results were defined as a final valve area (VA) ≥1.5 cm^2 without mitral regurgitation (MR) >2/4. Good results at 2 years were defined as survival without operation and with continuing good functional results (NYHA class I or II).

Results were as follows:

	Inoue	Double-Balloon	p
Increase in VA (2D echo) (cm^2)	0.86 ± 0.29	0.92 ± 0.35	0.01
MR ≥ 3/4 (Sellers) (%)	2.3	4.1	0.08
Good immediate results (%)	92.8	88.9	0.02
Good results at 2 years (%)	85 ± 6	86 ± 3	0.46

We conclude 1) PMC with IN provides better immediate results than DB, mainly because of a tendency towards less frequent severe MR. 2) Nevertheless, no difference in functiona1 results is apparant at 2 years.

1024-78 Long Term (6 year) Outcome After Catheter Balloon Valvuloplasty in Patients with Mitral Stenosis

Sharon Orrange, David Kawanishi, Becky Lopez, Susan Curry, Shahbudin Rahimtoola. *University of So. California, Los Angeles, CA*

Catheter balloon valvuloplasty (CBV) for mitral stenosis was performed in 132 patients (pts) from 1986 to '94. There were 104 women (79%) and 28 men, aged 44 ± 14 years. Pre-CBV, 12 pts were NYHA Functional Class (FC) IV, 87 in FC III, 28 FC II and 2 were FC I. CBV increased mitral valve area (MVA) from 0.98 ± 0.26 to 1.94 ± 0.57 cm^2, $p < 0.001$.

There were 6 early deaths up to 1 month ("procedure-related"); all 4 late deaths occurred after elective valve replacement (VR) was performed 18.2 ± 25 months later. Actuarial 6 yr survival was 83 ± 6% when mortality after VR is included, excluding these 6 yr survival was 95 ± 1%. Actuarial 1, 3 and 6 yr event-free survival (survival without VR or repeat CBV) were 80 ± 4%, 76 ± 4% and 63 ± 7%. Pre-CBV variables were not significant predictors of outcome. On multivariate analysis, post-CBV independent predictors of 6 yr event-free survival were 1) MVA ≥1.5 vs <1.5 cm^2, 73 ± 8% vs 32 ±12%; 2) Pulmonary artery (PA) wedge ≤18 vs >18 mmHg, 84 ± 6% vs 38 ± 12%, $p < 0.001$ for both. Pts. with MVA ≥1.5 cm^2 (n = 96) could be further divided into high and low-risk subgroups for 6 yr event-free survival by 3 post-CBV variables: 1) PA wedge ≤18 vs >18, 90 ± 6% vs 46 ± 15% (p = 0.002); 2) Mean PA <30 vs ≥30, 89 ± 6% vs 54 ± 14% (p = 0.06); 3) Cardiac Index (CI) ≥2.5 vs <2.5, 82 ± 8% vs 53 ± 17% (p = 0.002). Pts with post-CBV MVA <1.5 (n = 24) had no additional predictors of event-free survival. Of those pts who did not undergo VR or repeat CBV 94% were FCI or FCII.

Conclusions: CBV for mitral stenosis has good long term results up to 6 yrs. Late deaths were related to elective surgery. 6 yr event-free survival was very good in pts with post-CBV MVA ≥1.5 cm^2 especially if PA wedge was ≤18 or CI was ≥2.5.

1024-79 Late Cardiac Catheterization Results of Catheter Balloon Commissurotomy for Mitral Stenosis at Rest and Exercise

David Kawanishi, Becky Lopez, Sharon Orrange, Susan Curry, Shahbudin Rahimtoola. *University of Southern California, Los Angeles, CA*

Cardiac catheterization (cath) was performed on 132 patients (pts) both pre and immediately post catheter balloon commissurotomy (CBC). Sixty eight pt's had cath performed at 3–6 months post-CBC and twenty had a late follow-up cath (mean 3.2 yrs, range 1–7 yrs). At late follow-up cath 16 of the 20 pts were NYHA functional class (FC) I or II; 13 females and 3 males age 40 ± 11 yrs. We have reviewed the sequential hemodynamic findings in these 16 pt's to see if hemodynamic improvement achieved by CBC is sustained.